

REMARKS

Claims 1 – 8 and 11 – 17 are pending. Claims 12 – 17 are withdrawn from consideration. Claim is currently amended.

Rejections Under 35 U.S.C. § 112

Claims 1 – 8 and 11 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The rejection is respectfully traversed for the following reasons.

The Examiner has asserted that there is not sufficient support for the claim limitation “a non-fluorinated compound.” Applicants disagree. The claim limitation “a non-fluorinated compound” can be found in original claim 20 (now canceled). Nevertheless, in order to advance prosecution, Applicants have amended claim 1 to recite “a non-fluorinated monomer” instead of “a non-fluorinated compound.” Applicants therefore respectfully request the rejection under § 112, first paragraph, be withdrawn.

Claims 1 – 8 and 11 have also been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The rejection is respectfully traversed for the following reasons.

The Examiner has asserted that the claim language “derived from” and “derivative” render the claims indefinite because “[i]t is unclear as to how far ‘derived from’ the claimed component can be, and continue to fall within the scope of the claims.” Applicants have amended claim 1 to replace “a polymer derived from” to “a copolymer comprising” to address the Examiner’s concerns regarding the “derived from.”

Applicants have not amended the claims with regard to the claim language “derivative.” The language at issue is “an ester derivative of an alpha-hydroxy acid.” The essential inquiry pertaining to the clarity and precision requirement of § 112, second paragraph, “is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity” (MPEP § 2173.02). One of ordinary skill in the art can certainly understand the metes and bounds of the present claims with respect to the term “an ester derivative of an alpha-hydroxy acid,” particularly in view of the specification. The specification explains the

term “an ester derivative of an alpha-hydroxy acid” at page 3, line 30, through page 4, line 4. “Definiteness of claim language must be analyzed, not in a vacuum, but in light of the content of the particular application disclosure.” (MPEP § 2173.02.) The claim language “an ester derivative of an alpha-hydroxy acid” is not indefinite when analyzed in light of the specification.

In view of the above, Applicants respectfully request that the rejection under § 112, second paragraph, be withdrawn.

Rejections Under 35 U.S.C. § 103

Claims 1 – 8 and 11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,380,336 (“Soane”) in view of U.S. Patent No. 5,977,228 (“Mauer”). The rejection is respectfully traversed for the following reasons.

Soane discloses water and oil repellency imparting compositions for fibrous substrates. The compositions comprise a copolymer comprising (a) a fluoroaliphatic radical-containing agent, (b) stearyl (meth)acrylate, (c) a chlorine-containing compound, and (d) a monomer selected from those that contain an anhydride functional group or are capable of forming an anhydride functional group. The composition can optionally comprise a plasticizer.

Mauer teaches an aqueous floor finish composition comprising at least one polymeric film forming agent and a conventional plasticizing agent. In addition, the floor finish composition may comprise minor amounts of fluorochemical compound leveling agents.

The Examiner has asserted that “[o]ne of ordinary skill would be motivated to select the plasticizers identified as conventional in Mauer for use in Soane given the reasonable expectation of the functioning of the plasticizer in the composition of Soane and the suggestion in Soane to use conventional plasticizers.”

As noted at page 2 of Applicants’ specification, water-based compositions for making fibrous substrates or leather oil and water repellent typically require a heat treatment at elevated temperature (for example, 60°C or more) upon application on the substrate to achieve optimal properties. Accordingly, such aqueous compositions are not suitable for use by a customer that wants to treat a substrate such as, for example, a leather jacket or a garment. Treatments by customers are typically done at room temperature by spraying the composition on the substrate desired to be treated and then leaving that substrate to dry at ambient conditions.

Surprisingly, Applicants have discovered that by incorporating certain plasticizers into the aqueous compositions of the invention comprising a fluorochemical compound, the aqueous compositions can provide advantages such as providing good oil- and/or water-repellency properties to a substrate upon application at ambient conditions without the need for a heat treatment (see, for example, page 3, lines 10 – 13, and the Examples). The aqueous compositions of the invention can therefore be applied in an easy way using methods typically used by consumers. In addition, incorporation of the plasticizers also improved wettability of the compositions.

The class of plasticizers that provide such surprising results is quite small. Applicants have discovered that the class is limited to ester derivatives of an alpha-hydroxy acid that have a melting point of not more than 35°C and a water solubility of not more than 10% by weight at 25°C. Not just any conventional plasticizer can be used. As a matter of fact, as demonstrated in Table 6 of the Examples, not just any ester derivative of an alpha-hydroxy acid can be used. The ester derivative of an alpha-hydroxy acid must have a melting point of not more than 35°C and a water solubility of not more than 10% by weight at 25°C.

Neither Soane nor Mauer teach or suggest that incorporation of ester derivatives of an alpha-hydroxy acid that have a melting point of not more than 35°C and a water solubility of not more than 10% by weight at 25°C into an aqueous composition comprising the fluorochemical of the invention will enable the composition to provide advantages such as providing good oil- and/or water-repellency properties to a substrate upon application at ambient conditions without the need for a heat treatment. Soane does not teach or disclose any of the plasticizers of the invention. Mauer includes three plasticizers that fall within the scope of the present invention in a random list of over twenty conventional plasticizers. Mauer does not teach or suggest which plasticizers will provide the unexpected advantages discussed above.

In view of the above, claims 1 – 8 and 11 are unobvious and patentable over the combination of Soane and Mauer. Applicants therefore respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn.

Concluding Remarks

It is submitted that the application is in condition for allowance. Reconsideration and allowance of Applicants' claims is respectfully requested.

Respectfully submitted,

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